A concave mirror, shown below, has a radius of curvature of 10 cm. A 5 cm tall object is located 15 cm in front of the mirror.

(a) Mark and label \( C \), the location of the center of curvature of the mirror.

(b) Mark and label \( F \), the location of the focal point.

(c) Draw the object as an arrow with its tail on the principal axis.

(d) Draw the three rays to find the location of the image. Sketch the image as an arrow.

(e) Calculate the exact image distance. Does it look like it agrees with your diagram?

A convex mirror, shown below, has a radius of curvature of 10 cm. A 5 cm tall object is located 15 cm in front of the mirror.

(a) Draw the principal axis. Mark and label \( C \), the location of the center of curvature of the mirror.

(b) Mark and label \( F \), the location of the focal point.

(c) Draw the object as an arrow with its tail on the principal axis.

(d) Draw the three rays to find the location of the image. Sketch the image as an arrow.

(e) Calculate the exact image distance. Does it look like it agrees with your diagram?